

What is claimed is:

1. A read clock circuit for a recording disk system that has servo sectors, the circuit comprising:

a variable frequency oscillator/phase-locked loop (VFO/PLL) receiving a servo sector transition signal from transitions detected in a servo sector and outputting a servo frequency signal that is synchronous to the servo sector transition signal, and
a frequency synthesizer generating a read clock signal based on the servo frequency signal, the read clock signal being synchronous with the servo sector transition signal.

2. The read clock circuit according to claim 1, wherein the transitions detected in the servo sector are from an automatic gain control (AGC) field of the servo sector.

3. The read clock circuit according to claim 1, wherein the transitions detected in the servo sector are from a position error signal (PES) field of the servo sector.

4. The read clock circuit according to claim 1, wherein the transitions detected in the servo sector are from a track identification signal (TID) field of the servo sector.

5. The read clock circuit according to claim 1, wherein the servo frequency signal is based on transitions from a plurality of servo sector fields.

6. The read clock circuit according to claim 5, wherein the servo sector transition signal includes transitions from at least one automatic gain control (AGC) field, at least one position error signal (PES) field, and at least one TID field.

7. The read clock circuit according to claim 1, wherein a phase of the read clock signal is derived from the servo frequency signal.

8. The read clock circuit according to claim 1, wherein the servo sector field is corrupted, and wherein the VFO/PLL receives the servo sector transition signal related to detected transitions in the corrupted servo sector field, the VFO/PLL outputting a servo frequency signal that is synchronous to the servo sector transition signal.

9. The read clock circuit according to claim 1 wherein the disk recording system is a data banded recording system, and wherein the frequency synthesizer generates a unique read clock signal for each data band.

10. A banded recording sector servo disk drive comprising:
a data recording disk having a plurality of data bands, each data band having data recorded at a unique frequency, and a plurality of servo sectors extending in a radial direction across the bands;
a variable frequency oscillator/phase-locked loop (VFO/PLL) for receiving a servo sector transition signal from transitions detected in a servo sector and outputting a servo frequency signal that is synchronous to the servo sector transition signal;
a frequency synthesizer receiving the servo frequency signal and generating a plurality of unique read clock signals based on the servo frequency signal, the read clock signal being synchronous with the servo sector transition signal, and each unique read clock signal corresponding to a unique frequency of a data band; and
a controller coupled to the frequency synthesizer and providing a data band identification signal to the frequency synthesizer.
11. The disk drive according to claim 10, wherein the transitions detected in the servo sector are from an automatic gain control (AGC) field of the servo sector.
12. The disk drive according to claim 10, wherein the transitions detected in the servo sector are from a position error signal (PES) field of the servo sector.
13. The disk drive according to claim 10, wherein the transitions detected in the servo sector are from a track identification signal (TID) field of the servo sector.
14. The disk drive according to claim 10, wherein the servo frequency signal is based on transitions from a plurality of servo sector fields.

15. The disk drive according to claim 14, wherein the servo sector transition signal includes transitions from at least one automatic gain control (AGC) field, at least one position error signal (PES) field, and at least one TID field.

16. The disk drive according to claim 10, wherein a phase of the read clock signal is derived from the servo frequency signal.

17. The disk drive according to claim 10, wherein the servo sector field is partially corrupted, and wherein the VFO/PLL receives the servo sector transition signal related to detected transitions in the non-corrupted region of the servo sector field, the VFO/PLL outputting a servo frequency signal that is synchronous to the servo sector transition signal from the non-corrupted region.

18. The disk drive according to claim 10, wherein the nearest prior servo sector field is corrupted, and wherein the VFO/PLL receives the servo sector transition signal related to detected transitions in the next nearest prior servo sector field, the VFO/PLL outputting a servo frequency signal that is synchronous to the servo sector transition signal.